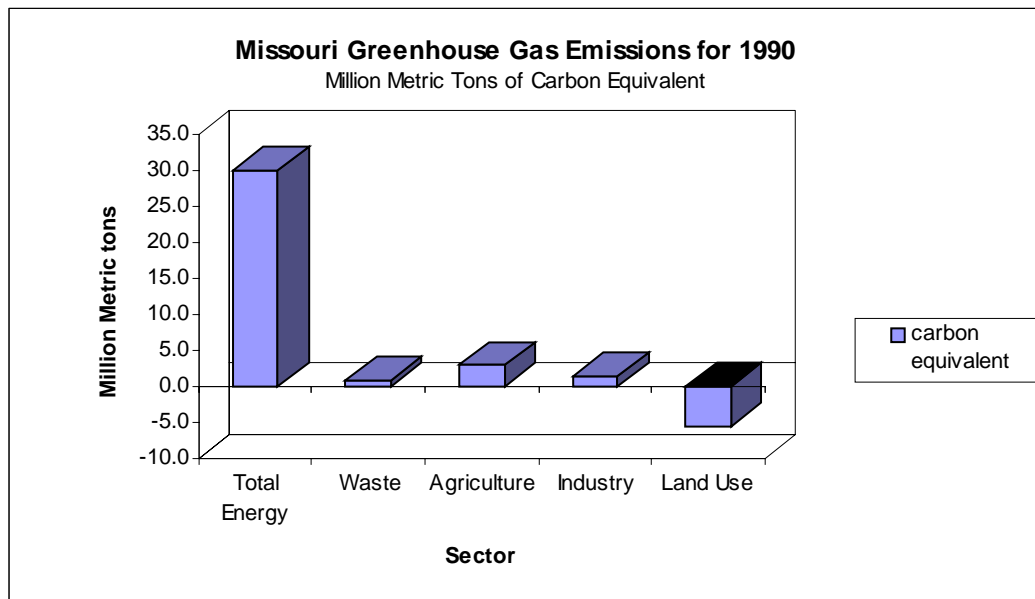


MISSOURI GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The report *“Inventory of Missouri’s Estimated Greenhouse Gas Emissions in 1990”* provides a detailed inventory of greenhouse gas emissions and sinks for Missouri in 1990. Emissions were estimated using methods from EPA’s 1995 guidance document ***State Workbook: Methodologies for Estimating Greenhouse Gas Emissions***. In 1990, Missouri emitted 29.3 million metric tons of carbon equivalent (MMTCE). Missouri estimated emissions of 1.2 MMTCE from biomass fuels, and from other sources not included in the workbook. Emissions from these sources are not included in the reported total or in the table below.¹

The principal greenhouse gas was carbon dioxide, comprising 92.1 million metric tons (25.1 MMTCE). Other emissions included 0.5 million metric tons of methane (3.0 MMTCE), 10 thousand metric tons of nitrous oxide (0.9 MMTCE), and 1 million metric tons of perfluorocarbons (0.3 MMTCE).

¹ Note that the state of the art emission inventory method has advanced since Missouri completed its inventory; therefore, we have made the following adjustments to Missouri’s emission estimates. First, we excluded emission estimates for sources not covered by the most recent inventory guidance (<http://www.epa.gov/ttnchie1/eiip/techrep.htm#green>). These emissions include methane from biofuels, oxidation of carbon monoxide during fossil fuel combustion, and nitrous oxide from soil disturbances. Second, we used updated values for global warming potentials.

Missouri Greenhouse Gas Emissions for 1990

BY SECTOR	CO2 (MMTCE)	Methane (MMTCE)	Nitrous Oxide (MMTCE)	HFCs, PFCs, and SF6 (MMTCE)	Total GHG Emissions (MMTCE)
Energy - Residential	2.0	*	*	*	2.0
Energy - Commercial	1.1	*	*	*	1.1
Energy - Industrial	2.8	*	*	*	2.8
Energy - Transport	10.8	*	*	*	10.8
Energy - Utility	12.8	*	*	*	12.8
Energy - Exported Electricity	0.0	*	*	*	0.0
Energy - Other	*	0.2	0.3	*	0.4
Total Energy	29.6	0.2	0.3	*	30.0
Waste	0.0	0.7	0.0	*	0.7
Agriculture	0.2	2.1	0.6	*	2.9
Industry	1.0	*	0.1	0.3	1.3
Land Use	-5.7	*	*	*	-5.7
Total	25.1	3.0	0.9	0.3	29.3

All emissions are reported in million metric tons of carbon equivalent (MMTCE).

An asterisk (*) indicates that emissions of the gas from this sector were zero, insignificant, or not reported.

Emissions due to coal mining and extraction of natural gas and oil are included in the energy – other figures, and emissions from biofuel combustion are excluded.

The major source of carbon dioxide emissions was fossil fuel combustion (97%), with minor emissions from cement and lime manufacturing. Carbon dioxide sinks (i.e., an increase in forest carbon storage) offset about 19% of the total carbon dioxide emissions. Sources of methane emissions were domesticated animals (43%), manure management (28%), landfills (24%), natural gas production (4%) and fossil fuel combustion (1%). Nitrous oxide emissions were primarily attributable to fertilizer use (61%), fossil fuel combustion (28%), and nitric acid production (10%). Emissions of perfluorocarbons were entirely attributable to aluminum production.

Missouri's emissions in 1990 were 5.8 MTCE per capita, compared to 1990 U.S. emissions of 6.4 MTCE per capita.